(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 August 2003 (07.08.2003)

PCT

(10) International Publication Number
WO 03/063874 A1

(51) International Patent Classification[7]: A61K 31/519, 31/502, 31/4725, C07D 239/88, 495/04, 471/04, 491/04, 401/06, 237/32, 217/24, A61K 31/517 // (C07D 495/04, 335:00, 239:00) (C07D 471/04, 239:00, 221:00) (C07D 491/04, 311:00, 239:00)

(21) International Application Number: PCT/JP03/00708

(22) International Filing Date: 27 January 2003 (27.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PS 0197 29 January 2002 (29.01.2002) AU

(71) Applicant *(for all designated States except US)*: **FUJISAWA PHARMACEUTICAL CO., LTD.** [JP/JP]; 4-7, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 541-8514 (JP).

(72) Inventors; and

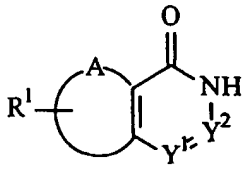
(75) Inventors/Applicants *(for US only)*: **ISHIDA, Junya** [JP/JP]; c/o Fujisawa Pharmaceutical Co., Ltd., 4-7, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 541-8514 (JP). **HATTORI, Kouji** [JP/JP]; c/o Fujisawa Pharmaceutical Co., Ltd., 4-7, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 541-8514 (JP). **KIDO, Yoshiyuki** [JP/JP]; c/o Fujisawa Pharmaceutical Co., Ltd., 4-7, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 541-8514 (JP). **YAMAMOTO, Hirofumi** [JP/JP]; c/o Fujisawa Pharmaceutical Co., Ltd., 4-7, Doshomachi 3-chome, Chuo-ku, Osaka-shi, Osaka 541-8514 (JP).

(74) Agent: **TABUSHI, Eiji**; c/o Fujisawa Pharmaceutical Co., Ltd., Osaka Factory, 1-6, Kashima 2-chome, Yodogawa-ku, Osaki-shi, Osaka 532-8514 (JP).

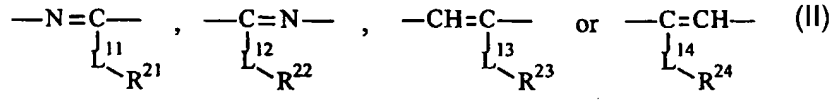
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

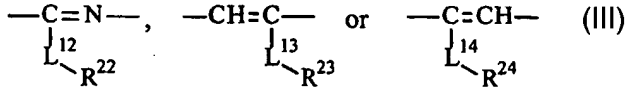
(54) Title: CONDENSED HETEROCYCLIC COMPOUNDS



(I)



(II)



(III)

(57) Abstract: A condensed heterocyclic compound having poly(adenosine 5'-diphospho-ribose)polymerase (PARP) inhibitory activity represented by the formula (I): wherein R^1 is hydrogen, halogen, lower alkyl or lower alkoxy, A and two adjacent carbon atoms of the six membered ring to be bonded with A form benzene ring, pyridine ring, etc, $-Y^1=Y^2-$ is formula (II) wherein L^{11}, L^{12}, L^{13} and L^{14} is (1) lower alkylene, (2) lower alkenylene, etc, and R^{21}, R^{22}, R^{23} and R^{24} is (1) cyclic amino group, which is substituted with phenyl optionally substituted with one or more suitable substituent(s), etc. provided that when A and two adjacent carbon atoms of the six membered ring to be bonded with A form benzene ring, then $-Y^1=Y^2-$ is formula (III) or its prodrug, or their salts.

WO 03/063874 A1